

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A leakage detection apparatus for a multi-channel inkjet cartridge comprising:

a plurality of electrodes, each of which is disposed in each channel of the inkjet cartridge
~~disposed in one of channels of the inkjet cartridge respectively,~~ and contacts a
reagent in the corresponding channel; and
a controller, coupled to the electrodes, to detect leakage between channels.

2. (Original) The leakage detection apparatus as claimed in claim 1, wherein the controller includes a voltage supply device for providing voltage to one of the electrodes at a time.

3. (Original) The leakage detection apparatus as claimed in claim 1, wherein the controller includes a detection circuit for coupling any two of the electrodes, and the voltage supply device is coupled to the electrodes via the detection circuit.

4. (Original) The leakage detection apparatus as claimed in claim 1, wherein the controller includes a display to display leakage detection results.

5. (Currently Amended) An inkjet dispensing apparatus comprising:

a cartridge including a plurality of channels, wherein reagents are received in the channels;

a chip, disposed on the cartridge, including a plurality of first through holes communicating with one of the channels respectively;

a plurality of electrodes, each of which is disposed in each channel of the inkjet cartridge ~~disposed in one of the channels of the cartridge~~ respectively, and contacts the reagent in the corresponding channel; and

a controller, coupled to the electrodes, to detect leakage between channels.

6. (Original) The inkjet dispensing apparatus as claimed in claim 5, wherein the chip is made of glass.

7. (Original) The inkjet dispensing apparatus as claimed in claim 5, wherein the chip is covered by an electric-isolating layer.

8. (Original) The inkjet dispensing apparatus as claimed in claim 5, further comprising:

a barrier layer, disposed on the chip, including a plurality of second through holes communicating with the first through holes respectively; and

a nozzle plate, disposed on the barrier layer, including a plurality of orifices communicating with the second through holes respectively.

9. (Original) The inkjet dispensing apparatus as claimed in claim 8, wherein the nozzle plate is made of polyimide.

10. (Original) The inkjet dispensing apparatus as claimed in claim 5, wherein the controller includes a voltage supply device for providing voltage to one of the electrodes at a time.

11. (Original) The inkjet dispensing apparatus as claimed in claim 10, wherein the controller includes a detection circuit for coupling any two of the electrodes, and the voltage supply device is coupled to the electrodes via the detection circuit.

12. (Original) The inkjet dispensing apparatus as claimed in claim 5, wherein the controller includes a display to display leakage detection results.

13. (Currently Amended) A leakage detection method comprising:

providing an inkjet cartridge, a plurality of electrodes, and a controller, wherein the inkjet cartridge includes a chip and a plurality of channels, reagents are received in the channels, and the electrodes are coupled to the controller;

inserting ~~the~~ each of the electrodes to ~~one of the~~ each channels of the inkjet cartridge ~~respectively~~ so that each of the electrodes contacts the reagent in the corresponding channel; and

the controller detecting the leakage between the channels via the electrodes.

14. (Original) The leakage detection method as claimed in claim 13, wherein the chip is made of glass.

15. (Original) The leakage detection method as claimed in claim 13, wherein the chip is covered by an electric-isolating layer.

16. (Original) The leakage detection method as claimed in claim 13, further comprising:

after inserting the electrodes into the channels, the controller providing voltage to one of the electrodes.

17. (Original) The leakage detection method as claimed in claim 13, further comprising:

after the controller detects leakage, the controller displays leakage detection results.